



Application No. 10/662,950
Preliminary Amendment
Dated April 14, 2004

VIA FACSIMILE TRANSMISSION - Official
To OIPE - Fax Number 703-746-4060

Attorney Docket No. YO896-0213R5

In the Specification:

Please add the following new section of text at Page 12, after line 15:

--Discussion from Incorporated Provisional Application No. 60/070,758 Filed 01/08/1998

--For the RF tags as presently envisioned, when the RF field to power the tag is shut off, the tags storage capacitor loses its energy in less than 100 microseconds. The state information on the tag is then lost. This is particularly injurious when a base station sending polarized RF is interrogating an array of tags with polarized antennas. Some tags may not be powered up by the particular polarization used, and the communication protocol talks to each tag in turn. The tag state is changed so that it does not then interfere with communication with other tags for the rest of the communication session. If the polarization sent out from the base station is changed, some of the tags will lose power and change state. When the polarization is changed back to the original polarization, these tags will then power up in the "ready state where they can then interfere with communications with other tags.

--We want the tags to power down when we have finished the communication session, so that they can reset to the ready state when they power up again. We just don't want them to do it in the one second or so that it takes to interrogate the tags in second group of tags. We provide a separate power source on the chip which powers just the state indicators which we would like to keep around for the few seconds that it takes to change polarization and to interrogate tags which are powered only by the new polarization. If we provide power only to a few transistors on the chip, and don't power up the clock and all the tag electronics, the amount of energy needed is small, and can be provided by a small capacitor C_{AUX} as shown in Figs. 1-3. The RF tag has two types of

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states, major and minor. The major states are the READY, ID and DATA-EXCHANGE. Major state information, and some minor state information such as the value in the counter used during the identification protocol may be saved. Other minor state information, such as the address from which you were trying to access data when the power failed, may be lost with little impact on the communication protocol. You have to resend the whole command anyway.--